UPDATED CHECKLIST OF THE FREE-LIVING MARINE COPEPODA (CRUSTACEA) OF MEXICO

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RESUMEN

La fauna de copépodos de los mares mexicanos ha sido estudiada desde hace décadas. Sin embargo, el número de especies presentes en México no se ha establecido y sólo existen listas faunísticas restringidas a ciertas zonas. En este trabajo se presenta una lista de las especies de copépodos marinos registradas en las aguas mexicanas del Pacífico y del Atlántico. El número total de especies (479) representa principalmente la riqueza específica de los ambientes de la columna de agua, con los Calanoida como el grupo más diverso. El conocimiento de los Harpacticoida, un grupo muy diverso en el meiobentos, es aún escaso en México, por lo que debe ser incrementado. Se presenta también la literatura taxonómica y de distribución de copépodos marinos para México.

Palabras clave: copépodos, México, lista de especies.

ABSTRACT

The marine copepod fauna of the Mexican seas has been studied for decades. However, the number of species occurring in these waters has not been estimated, the only faunistic checklists being from restricted areas. In this paper, we present an updated and revised checklist of the marine copepods recorded in Mexican territorial waters of the Pacific and the Atlantic. The total number of species (479) represent mainly collections from the water column environments, with the pelagic group Calanoida being the most diverse. Knowledge of the very diverse meiobenthic copepods belonging to the Harpacticoida is still limited in Mexico, and should be improved. A list of references on the taxonomy and distribution of Mexican marine copepods is also presented here.

Key words: copepods, Mexico, checklist.

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INTRODUCTION

The free-living marine copepods of the Mexican seas have been surveyed for decades (Campos & Suárez, 1994; Suárez, 1996); however, only a few of these studies have covered a wide area, either in the Pacific or the Atlantic waters of Mexico. Therefore, previous faunistic checklists of the Mexican copepod fauna refer to restricted areas, such as the Gulf of California (Brinton et al., 1986), the Caribbean Sea (Reid, 1990) or the southern Gulf of Mexico (Suárez, 1992a). There are no current estimations of the diversity of this group in Mexico. In this work, an updated and revised checklist of the marine copepods recorded from Mexico is here presented along with the most relevant literature for the Mexican fauna. The list includes copepods from oceanic, coastal, and estuarine environments. The Mexican seas have been divided into four large areas: Gulf of Mexico and Caribbean Sea in the Atlantic, and Mexican Pacific and Gulf of California, in the Pacific.

Preference was given to the literature with species lists and taxonomic aspects of different taxa. General, comprehensive works or revisions of selected taxa (Nishida, 1985; Walter, 1989; Markhaseva, 1996; Razouls, 1996) were also consulted.

The analysis of published and unpublished (thesis, project reports) information on the free-living marine copepods from Mexican waters of the Atlantic and the Pacific oceans yields a total of 478 species belonging to 5 orders, 54 families, and 135 genera. Out of the total number of species, 325 (ca. 68 %) belong to the order Calanoida, 62 (12.9 %) to the Poecilostomatoida, 20 (4.2 %) to the Cyclopoida, 36 (7.3 %) to the Harpacticoida, 24 (5 %) to the Siphonostomatoida, and the remaining 12 (2.7 %) to the Monstrilloida, a group in which only the adult stage is free-living.

Down to the family and genus level, the order Calanoida is clearly the most diverse group, with 26 families and 78 genera present in Mexican waters, followed by Harpacticoida (17 and 30) and Poecilostomatoida (6 and 12). Within the calanoids, the family Aetideidae is the most speciose, with 43 species. The families Euchaetidae (37 species), Pontellidae (41), and Scolecithricidae (30) are also well represented in Mexico. Within the Poecilostomatoida, the two most species-rich families in Mexico are Corycaeidae (with 27 species) and Sapphirinidae (with 17).

Most of the species included in this checklist (89%) are records from water column environments (epi- and mesopelagic); a relatively low number of epibenthic or benthic forms is also included (58 species). However, according to Marcotte (1986), meiobenthic harpacticoids are quite diverse, even more than calanoids. Surveys in the benthic environments of the Mexican Seas are expected to yield a significant number of new records of harpacticoid copepods. For instance, Reid (1990) listed 211 harpacticoid copepod species from the Caribbean and Central America, and only a few of these have been recorded in Mexico. The checklist is also expected to grow steadily as deeper plankton samplings are carried out, as the knowledge on the copepod fauna below 300-400 m in the Mexican seas is still quite limited.

Regarding the different areas analysed, 269 copepod species have been recorded in the Gulf of Mexico, 201 in the Mexican Caribbean, 154 in the Gulf of California and 236 in the Mexican Tropical Pacific area. Of the total number of species, 82 have been recorded only in the Gulf of Mexico, 31 in the Mexican Caribbean area, 30 in the Gulf of California, and 93 in the Tropical Pacific; the reason for this figure in the tropical Pacific is the addition of the rich copepod fauna associated to hydrothermal vents.

Reid (1990) listed a total of 430 species of free-living marine copepods for Central America, Mexico and the entire Caribbean Sea. However, only 167 of these were recorded in Mexico at that time. Hernández-Trujillo (1996) estimated as 150 the number of species dwelling in the Gulf of Mexico and Caribbean Sea, and as 293 the number of species reported from the Pacific area, with 89 species common to both areas. The total number of marine copepod species estimated by Hernández-Trujillo for Mexico (354) is ca. 26 % lower than the figure presented in this report. Most differences may result in our inclusion of recent works on harpacticoids, monstrilloids, and on deep-water copepods.

List of the marine free-living and semiparasitic copepods collected in Mexican waters, using Huys & Boxshall's (1991) taxonomic scheme

I: Gulf of Mexico; II: Caribbean Sea; III. Tropical Pacific and Californian coast; IV: Gulf of Cali-

Subclass Copepoda Milne-Edwards, 1840 Infraclass Neocopepoda Huys & Boxshall,

Superorder Gymnoplea Giesbrecht, 1882 Order Calanoida G.O. Sars, 1903

Family Acartiidae Sars, 1900

Acartia bacoreliuisensis Zamora-Sánchez & Gómez-Aguirre, 1985. IV

A. californiensis Trinast, 1976. III

A. clausi Giesbrecht, 1892, III

A. danae Giesbrecht, 1889 I, II, III, IV

A. lilljeborgii Giesbrecht, 1889. I, II, III, IV

A. longiremis (Lilljeborg, 1853). IV

A. negligens Dana, 1852. II, III, IV

A. spinata Esterly, 1911. I, II

A. tonsa Dana, 1849. I. II. III. IV

Family Aetideidae Giesbrecht, 1892

Aetideopsis multiserrata (Wolfenden, 1904) III, E. messinensis (Claus, 1863). I, II

Aetideus acutus Farran, 1929. I, II, III, IV

A. armatus Boeck, 1872. I, III, IV

A. bradyi A. Scott, 1909. III, IV

A. giesbrechti (Cleve, 1904). I, II, III

A. mexicanus Park, 1974. I

A. truncatus Bradford, 1971. III, IV Bradyidius arnoldi Fleminger, 1957. I

Chiridiella bispinosa Park, 1970, I

Ch. chainae Grice, 1969, II

Ch. macrodactyla Sars, 1907. II

Chiridius gracilis Farran, 1908, I

Ch. mexicanus Park, 1975. I

Ch. molestus Tanaka, 1957. I

Ch. poppei Giesbrecht, 1892, I

Chirundina streetsii Giesbrecht. 1895 I. III

Euchirella amoena Giesbrecht, 1888. I. II. III

E. bella Giesbrecht, 1888. III

E. bitumida With, 1915, I

E. curticauda Giesbrecht, 1888. I, II, III

E. maxima Wolfenden, 1905. I

E. pseudotruncata Park, 1975. I

E. pulchra Lubbock, 1856, I, II

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E. rostrata (Claus, 1866). I
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- E. splendens Vervoort, 1963. I
- E. truncata Esterly, 1911. I
- E. venusta Giesbrecht, 1888. I, II, III, IV

Gaetanus armiger Giesbrecht, 1888. III

- G. brachyurus Sars, 1907. I
- G. brevicornis Esterly, 1906. III
- G. kruppii Giesbrecht, 1888. I
- G. latifrons Sars, 1925. I, II
- G. miles Giesbrecht, 1888. I, II, III
- G. minor Farran, 1905. I, II
- G. minutus Sars, 1907. I, II
- G. pileatus Farran, 1903. I, II
- G. pungens (Giesbrecht, 1895). III
- G. robustus (Sars, 1905). III
- G. tenuispinus (Sars, 1900). I, II

Undeuchaeta intermedia Scott, 1909. III

- U. major Giesbrecht, 1888. I, II
- U. plumosa (Lubbock, 1856). I, II

Family Arietellidae Sars, 1903

Arietellus armatus Wolfenden, 1911. I, II

- A. giesbrechti Sars, 1905. I, II
- A. pacificus Esterly, 1913. III
- A. plumifer Sars, 1905. I, II
- A. setosus Giesbrecht, 1892. II, III

Paraugaptilus buchani Wolfenden, 1904. I, III

Phyllopus bidentatus Brady, 1883. I, II, IV

Family Augaptilidae Sars, 1905

Augaptilus californicus Esterly, 1913. III

- A. depressus Esterly, 1913. III
- A. megalurus Giesbrecht, 1889. I
- A. romanus Esterly, 1913. III
- A. longicaudatus (Claus, 1863). I, II, IV

Euaugaptilus filigerus (Claus, 1863). I, II

- E. gracilis (Sars, 1905). I
- E. hecticus (Giesbrecht, 1889). I, II
- E. laticeps (Sars, 1905). I
- E. nodifrons (Sars, 1905). I

Centraugaptilus rattrayi (Scott, 1894). I

Haloptilus acutifrons (Giesbrecht, 1892). I, II, III, IV

H. chierchiae (Giesbrecht, 1889). IV

H. fertilis (Giesbrecht, 1892). I, II, III

H. furcatus Sars, 1920. I

H. longicornis (Claus, 1863). I, II, III, IV

H. mucronatus (Claus, 1863). I, II

H. ornatus (Giesbrecht, 1892). I, II, III, IV

H. oxycephalus (Giesbrecht, 1889). I. II, III

H. spiniceps (Giesbrecht, 1892). I, II

Heteroptilus attenuatus (Sars, 1905). II

Pachyptilus eurygnathus Sars, 1920. I

Family Calanidae Dana, 1849

Calanus minor (Claus, 1863). I, II, III, IV

C. pacificus Brodsky, 1948. III, IV

Canthocalanus pauper Giesbrecht, 1888. III

Cosmocalanus darwini (Lubbock, 1860). I,

Mesocalanus tenuicornis (Dana, 1849). I, II, III, IV

M. lighti (Bowman, 1955). III

Neocalanus gracilis (Dana, 1849). I, II, III, IV

N. cristatus (Mori, 1937). III

N. robustior (Giesbrecht, 1888). I, II, III, IV Undinula vulgaris (Dana, 1852). I, II, III,

IV

Family Calocalanidae Bernard, 1958

Calocalanus contractus Farran, 1926. I, II, III, IV

C. gracilis Tanaka, 1956. I

- C. pavo (Dana, 1852). I, II, III, IV
- C. pavoninus Farran, 1936. I, IV
- C. plumulosus (Claus, 1863). I, II, III, IV
- C. styliremis Giesbrecht, 1888. I, II, III, IV

Mecynocera clausi Thompson, 1888. I, II,

Family Candaciidae Giesbrecht, 1892

Candacia aethiopica Dana, 1849. I, III, IV

C. bipinnata (Giesbrecht, 1889). I, III, IV

C. bradyi Scott, 1902. III

C. catula (Giesbrecht, 1889). III, IV

C. columbiae Campbell, 1929. III

- C. curta (Dana, 1849). I, III, IV
- C. discaudata Scott, 1909. III
- C. longimana (Claus, 1863). I, II
- C. pachydactyla (Dana, 1852). I, II, III, IV
- C. paenelongimana Fleminger & Bowman, 1956. I

- C. pectinata Giesbrecht, 1892. III C. pofi Grice & Jones, 1960. III, IV
- C. truncata (Dana, 1849). III, IV
- C. varicans (Giesbrecht, 1892). I, II, III, IV Paracandacia bispinosa (Claus, 1863). I, II
- P. simplex (Giesbrecht, 1889) . I, II

Family Centropagidae Giesbrecht, 1892

Centropages abdominalis Sato, 1913. III

- C. bradyi Wheeler, 1901. III
- C. calaninus (Dana, 1849). III
- C. caribbeanensis Park, 1970, I, II
- C. elongatus Giesbrecht, 1896. III
- C. furcatus (Dana, 1849). III, IV
- C. gracilis (Dana, 1849). III, IV
- C. hamatus (Lilljeborg, 1853). I, II
- C. longicornis Dana, 1849. III, IV
- C. typicus Krøyer, 1849. I
- C. velificatus (Oliveira, 1947) I, II
- C. violaceus (Claus, 1863). I, II

Family Clausocalanidae Giesbrecht, 1892

Clausocalanus arcuicornis (Dana, 1849). I, II,

- C. farrani Sewell, 1929. III, IV
- C. furcatus (Brady, 1883). I, II, III, IV
- C. jobei Frost & Fleminger, 1968. III, IV
- C. mastigophorus (Claus, 1866). IV
- C. parapergens Frost & Fleminger, 1968. IV
- C. paululus Farran, 1926. I
- Ctenocalanus longicornis Mori, 1937. III
- C. vanus Giesbrecht, 1888. I, III, IV

Family Eucalanidae Giesbrecht, 1892

Eucalanus californicus Johnson, 1938. III

- E. elongatus (Dana, 1849). I, II, III, IV
- E. hyalinus (Claus, 1866). III

Pareucalanus sewelli (Fleminger, 1973). I, II, P. sesquipedalis Park, 1994. III, IV

Rhincalanus cornutus (Dana, 1849). I, II, III, ΓV

R. nasutus Giesbrecht, 1888. I, II, III, IV

Subeucalanus crassus (Giesbrecht, 1888). I, II, V. oligarthra Steuer, 1904. I Ш

- S. inermis (Giesbrecht, 1892). III, IV
- S. monachus (Giesbrecht, 1888). I, II
- S. mucronatus (Giesbrecht, 1888). I, II

- S. pileatus (Giesbrecht, 1888). I, II, III
- S. subcrassus (Giesbrecht, 1888). I, II, III, IV
- S. subtenuis (Giesbrecht, 1888). I, II, III, IV

Family Euchaetidae Giesbrecht, 1892

Euchaeta acuta Giesbrecht, 1892. I, II, III, IV

- E. indica Wolfenden, 1905, IV
- E. longicornis (Giesbrecht, 1888). III, IV
- E. marina (Prestandrea, 1833). I, II, III
- E. marinella Bradford, 1974. III
- E. media Giesbrecht, 1888. I, II, III, IV
- E. paraconcinna Fleminger, 1957. I
- E. plana Mori, 1937. III?
- E. pseudotonsa Fontaine, 1967. I
- E. pubera Sars, 1907. I
- E. rimana Bradford, 1974. IV
- E. spinosa Giesbrecht, 1892. I, II, IV

Paraeuchaeta aequatorialis (Tanaka, 1958). Ш

- P. alaminae (Park, 1975). I
- P. barbata (Brady, 1883). I, II
- P. bisinuata Sars, 1907 I, III
- P. calva (Tanaka, 1958). I, II
- P. californica (Esterly, 1906). III, IV
- P. confusa (Tanaka, 1958). II
- P. copleyae Park, 1994. III, IV
- P. cosmosa (Tanaka, 1958). I, II
- P. gracilicauda (Scott, 1909)
- P. gracilis (Sars, 1905). I, II
- P. grandiremis (Giesbrecht, 1888). III, IV
- P. hansenii (With, 1915), I, II
- P. incisa (Sars, 1905). I, II
- P. malayensis Sewell, 1929. III
- P. mexicana Park, 1994. IV
- P. sarsi (Farran, 1908). I, II
- P. scopaeorhina Park, 1994. III, IV
- P. scotti (Farran, 1908). I, II
- P. tonsa (Giesbrecht, 1895). III
- P. triloba Park, 1994, IV
- P. vorax (Grice & Hulsemann, 1968). I, II
- Valdiviella brevicornis Sars, 1905. II, III

Family Heterorhabdidae Sars, 1903

Hemirhabdus latus Sars, 1905. I

Heterorhabdus clausi (Giesbrecht, 1888). IV

H. papilliger (Claus, 1863). I, II, III, IV H. spinifrons (Claus, 1863). I, II H. tanneri (Giesbrecht, 1895). III Heterostylites longicornis (Giesbrecht, 1889). I, II, IV

Family Lucicutiidae Sars, 1903

Lucicutia atlantica Wolfenden, 1904. I L. clausi (Giesbrecht, 1889). I, II L. flavicornis (Claus, 1863). I, II, III L. formosa Hulsemann, 1966. I L. gaussae Grice, 1963. I L. gemina (Farran, 1926). III

L. grandis (Giesbrecht, 1895). III L. magna Wolfenden, 1904. I

L. maxima Steuer, 1904. I

L. ovalis (Giesbrecht, 1895). I

L. pacifica Brodsky, 1950. III

Family Megacalanidae Wolfenden, 1904 Megacalanus princeps Wolfenden, 1904. I, II

Family Metridinidae Sars, 1902 Gaussia princeps (Scott, 1894). III Metridia brevicauda Giesbrecht, 1889. I, II, III M. curticauda Giesbrecht, 1889. III, IV

M. curticauda Giesbrecht, 1889. III, IV
M. pacifica Brodsky, 1950. III
M. princeps Giesbrecht, 1889. I, III
Pleuromamma abdominalis Lubbock, 1856. I,

II, III, IV

P. borealis (Dahl, 1893). III

P. gracilis (Claus, 1863). I, II, III, IV

P. piseki Farran, 1929. I, II

P. quadrungulata (Dahl, 1893). III

P. xiphias (Giesbrecht, 1889). I, II

Family Paracalanidae Giesbrecht, 1892

Acrocalanus andersoni Bowman, 1958. I, IV

A. gracilis Giesbrecht, 1888. IV

A. inermis Sewell, 1912. III, IV

A. longicornis Giesbrecht, 1888. I, II, III

A. monachus Giesbrecht, 1888. III, IV

Paracalanus aculeatus Giesbrecht, 1888. I, II, III, IV

P. denudatus Sewell, 1929. I, IV

P. indicus Wolfenden, 1904. II

P. nanus Sars, 1907. I P. parvus s.l. (Claus, 1863). III, IV P. quasimodo Bowman, 1971. I, II Parvocalanus crassirostris (Dahl, 1894). II

Family Phaennidae Sars, 1903

Cephalophanes tectus (Esterly, 1911).I, II, III

Cornucalanus indicus Sewell, 1929. I Phaenna spinifera Claus, 1863. I, II, III Xanthocalanus agilis Giesbrecht, 1892. I, II X. paululus Park, 1970. I, II

Family Pontellidae Dana, 1852

Anomalocera ornata Sutcliffe, 1949. I Calanopia americana Dahl, 1894. I, II Labidocera acuta (Dana, 1849). III, IV L. acutifrons (Dana, 1852). I, II, III, IV

L. aestiva Wheeler, 1901 I, II

L. detruncata (Dana, 1849). III, IV

L. diandra Fleminger, 1967. III, IV L. euchaeta Giesbrecht, 1888. III

L. johnsoni Fleminger, 1964. III, IV

L. jollae Esterly, 1906. III, IV

L. kolpos Fleminger, 1967. IV

L. lubbocki Giesbrecht, 1889. IV

L. minuta Giesbrecht, 1889. III, IV

L. mirabilis Fleminger, 1957. I, II

L. nerii (Krøyer, 1849). I, II, III

L. scotti Giesbrecht, 1897. I, II

L. trispinosa Esterly, 1905. III, IV

L. wilsoni Fleminger & Engchow, 1966. II Pontella agassizi Giesbrecht, 1895. III, IV

P. armata Dana, 1849. III

P. atlantica (Milne-Edwards, 1840). I, II

P. fera Dana, 1849. III

P. lobiancoi (Canu, 1888). I

P. meadi Wheeler, 1901. I, II

P. mimocerami Fleminger, 1956. I, II

P. polydactyla Fleminger, 1956. I

P. securifer Brady, 1883. I, III

P. spinicauda Mori, 1937. III

P. spinipes Giesbrecht, 1889. III, IV Pontellina plumata (Dana, 1849). I, II, III,

IV

- P. platychela Fleminger & Hulsemann, 1974. I
- P. sobrina Fleminger & Hulsemann, 1974. III, IV

Pontellopsis sp. Brady, 1883. IV

- P. brevis (Giesbrecht, 1889). I, II
- P. lubbocki Giesbrecht, 1889. III, IV
- P. occidentalis Esterly, 1906. III, IV
- P. perspicax Dana, 1852. I, II
- P. regalis Dana, 1852. I, III, IV
- P. tenuicauda Giesbrecht, 1892. III
- P. villosa Brady, 1883. III
- P. yamadae Mori, 1937. III

Family Pseudocalanidae Boeck, 1872

Pseudocalanus elongatus (Boeck, 1865). IV

Family Pseudodiaptomidae Herrick, 1884

Pseudodiaptomus acutus (Dahl, 1894). II

- P. cokeri González & Bowman, 1965. II
- P. culebrensis Marsh, 1913. III, IV
- P. euryhalinus Johnson, 1939. III, IV
- P. marshi Wright, 1936. II
- P. pelagicus Herrick, 1884. I
- P. wrighti Johnson, 1964. IV

Family Scolecithricidae Giesbrecht, 1892

Amallothrix gracilis Sars, 1905. I

Lophothrix frontalis Giesbrecht, 1895. I, II

- L. latipes Scott, 1894. I, II
- Scaphocalanus curtus (Farran, 1926). IV
- S. echinatus (Farran, 1905). I, IV
- S. magnus (Scott, 1909). III

Scolecithrix bradyi Giesbrecht, 1888. I, II, III, IV

- S. danae (Lubbock, 1856). I, II, III, IV
- S. elephas Esterly, 1913. III
- S. longirostris Esterly, 1913. III
- S. mollis Esterly, 1913. III
- S. obscura Esterly, 1913. III
- S. pacifica Esterly, 1905. III

Scolecithricella abyssalis (Giesbrecht, 1892). III,

- S. ctenopus (Giesbrecht, 1888). III, IV
- S. dentata (Giesbrecht, 1892). I, II
- S. emarginata (Farran, 1905). IV
- S. lobophora Park, 1970. I
- S. marginata (Giesbrecht, 1888). III
- S. nicobarica Sewell, 1929. III, IV
- S. pseudoarcuata Park, 1970. I

- S. tenuiserrata Giesbrecht, 1892. I, III
- S. vittata (Giesbrecht, 1892). I

Scottocalanus australis Farran, 1936. I

- S. hackusi Grice, 1969. I
- S. corystes Owre & Foyo, 1967. I, II
- S. helenae Lubbock, 1856. I, II
- S. persecans Giesbrecht, 1895. I, II
- S. securifrons (Scott, 1912). I, II
- S. thomasi Scott, 1909. I, II

Family Spinocalanidae Vervoort, 1951

Isaacsicalanus paucisetus Fleminger, 1983. IV

Mimocalanus crassus Park, 1970. I

M. heronae Damkaer, 1975. III?

Spinocalanus abyssalis (Giesbrecht, 1888). III

Family Stephidae Sars, 1902

Stephos deichmannae Fleminger, 1956. I

Family Temoridae Giesbrecht, 1892

Eurytemora affinis (Poppe, 1880). I, III, IV

E. hirundoides (Nordquist, 1888). I, IV

Temora discaudata Giesbrecht, 1889. III, IV

T. stylifera (Dana, 1852). I, II

T. turbinata (Dana, 1852). I, II, III, IV

Temoropia mayumbaensis Scott, 1894. I, II, IV

Family Tharybidae Sars, 1902

Parundinella manicula Fleminger, 1956. I

P. spinodenticulata Fleminger, 1956. I

Family Tortanidae Sars, 1902

Tortanus angularis Ohtsuka, 1992. II

T. setacaudatus Williams, 1906. I

Superorder Podoplea

Order Cyclopoida Burmeister, 1843

Family Oithonidae Dana, 1853

Oithona alvarezi Lindberg, 1955. III

- O. atlantica Farran, 1908. I, II
- O. attenuata Farran, 1913. III
- O. brevicornis Giesbrecht, 1891. I
- O. decipiens Farran, 1913. III
- O. fallax Farran, 1913. III
- O. fonsecae Ferrari & Bowman, 1980. I
- O. hebes Giesbrecht, 1891. I
- O. nana Giesbrecht, 1892. I, II, III, IV

- O. oculata Farran, 1913, I. II
- O. oswaldocruzi Oliveira, 1945. I, II
- O. plumifera Baird, 1843. I, II, III, IV
- O. rigida Giesbrecht, 1896. III
- O. robusta Giesbrecht, 1891. I, II, III, IV
- O. setigera (Dana, 1849). I, II, III, IV
- O. similis Claus, 1866. III
- O. simplex Farran, 1913. I, II
- O. tenuis Rosendorn, 1917. III
- Paroithona parvula Farran, 1908. III

Family Thaumatopsyllidae Sars, 1913

Caribeopsyllus chawayi Suárez-Morales, 1998. II

Order Monstrilloida Sars, 1901

Family Monstrillidae Dana, 1849

- Cymbasoma bowmani Suárez-Morales & Gasca, 1997. II
- C. boxshalli (Suárez-Morales, 1993c). II
- C. quintanarooensis (Suárez-Morales, 1994). II
- C. chelemense Suárez-Morales & Escamilla, 1997. I
- Monstrilla barbata Suárez-Morales & Gasca, 1992. II
- M. bitumida Suárez-Morales & Palomares-García, 1995. IV
- M. elongata Suárez-Morales, 1994. II
- M. mariaeugeniae Suárez-Morales & Islas-Landeros, 1993. II
- M. reidae Suárez-Morales, 1993a. II
- M. rebis Suárez-Morales, 1993b. II
- M. spinosa Park, 1967. III
- Monstrillopsis cigroi Suárez-Morales, 1993b. II

Order Poecilostomatoida

Family Clausidiidae Embleton, 1901

Hyphalion captans Humes, 1987. IV

Sapphirella tropica Wolfenden, 1906. II, III

Family Corycaeidae Dana, 1849

Corycaeus affinis McMurrich, 1916. III

- C. amazonicus Dahl, 1894. II
- C. anglicus Lubbock, 1857. IV
- C. brehmi Steuer, 1910. III, IV
- C. catus Dahl, 1894. I, II
- C. clausi Dahl, 1894. I, IV
- C. crassiusculus Dana, 1849. III, IV

- C. dubius Farran, 1911. III, IV
- C. flaccus Giesbrecht, 1891. I, II, III, IV
- C. furcifer Claus, 1863. I, II
- C. japonicus Mori, 1937. III, IV
- C. latus Dana, 1849. I, II, III, IV
- C. lautus Dana, 1849. I, II, III, IV
- C. limbatus Brady, 1883. I, II
- C. longistylis Dana, 1849. III
- C. obtusus Dana, 1849. IV
- C. ovalis Claus, 1863. IV
- C. pacificus Dahl, 1894. III
- C. robustus Giesbrecht, 1891. III
- C. speciosus Dana, 1849. I, II, III, IV
- C. subulatus Herrick, 1887. II
- C. trukicus Mori, 1937. IV
- C. typicus (Krøyer, 1849). I, II
- Farranula carinata (Giesbrecht, 1891). I, II
- F. gibbula (Giesbrecht, 1891). III
- F. gracilis (Dana, 1849). I, II
- F. rostrata (Claus, 1863). I, II, IV

Family Erebonasteridae Humes, 1987

Erebonaster protentipes Humes, 1987. IV Laitmatobius crinitus Humes, 1987. IV

Family Lichomolgidae Kossman, 1877

Macrochiron sargassi Sars, 1916. II

Family Oncaeidae Giesbrecht, 1892

- Lubbockia aculeata Giesbrecht, 1891. I, III
- L. squillimana Claus, 1863. I, II, III
- Oncaea conifera Giesbrecht, 1891. I, II, IV
- O. media Giesbrecht, 1891. I, II, IV
- O. media f. major Sewell, 1947. I
- O. mediterranea (Claus, 1863). I, II,
- O. minuta Giesbrecht, 1892. IV
- O. ornata Giesbrecht, 1891. I, II
- O. notopus Giesbrecht, 1891. I, II
- O. praeclara Humes, 1988. IV
- O. venusta Philippi, 1843. I, II, IV

Pachos punctatum (Claus, 1863). I, II, III

P. dentatum (Mori, 1932). III

Family Sapphirinidae Thorell, 1859

Copilia mirabilis Dana, 1849. I, II, III, IV

- C. quadrata Dana, 1849. I, II, III, IV
- C. vitrea (Haeckel, 1864). I, II, III

C. longistylis Mori, 1932. III

Sapphirina angusta Dana, 1849. I, II, III

- S. bicuspidata Giesbrecht, 1891. I
- S. auronitens Claus, 1863. I, II
- S. darwini Haeckel, 1864. III
- S. gastrica Giesbrecht, 1891. III
- S. gemma Dana, 1849. IV. I, II
- S. intestinata Giesbrecht, 1891. I
- S. metallina Dana, 1849. I, II, III
- S. nigromaculata Claus, 1863. I, II, III, IV
- S. opalina Dana, 1849, I, II, III, IV
- S. ovatolanceolata Dana, 1849. I, II
- S. scarlata Giesbrecht, 1891. I
- S. stellata Giesbrecht, 1891. I, II

Order Harpacticoida Sars, 1903 b Family Aegisthidae Giesbrecht, 1892 Aegisthus mucronatus Giesbrecht, 1891. I

Family Ameiridae Monard, 1927 Nitokra laingensis Fiers, 1986. I

Family Canthocamptidae Sars, 1911

Mesochra pacifica Gómez-Noguera & Fiers, Family Tachidiidae Sars, 1909 1997. III Euterpina acutifrons Dana, 1859

M. pseudoparva Gómez-Noguera & Fiers, 1997. III

Family Canuellidae Lang, 1944 Ellucana secunda Coull, 1971. II

Family Cletodidae Sars, 1911 Actinocletodes woutersi Fiers, 1986. I Enhydrosoma lacunae Jakubisiak, 1932. I Triathrix goldi Fiers, 1997. I Schizothrix sp. Fiers, 1997. I

Family Clytemnestridae Scott, 1909 Clytemnestra scutellata Dana, 1848. I, II, III C. rostrata (Brady, 1883). I, III

Family Ectinosomatidae Oloffson, 1917 Microsetella rosea (Dana, 1848). I, II, III, IV M. norvegica (Boeck, 1846). III, IV

Family Laophontidae Scott, 1912 Folioquinpes chathamensis (Sars, 1905). I Laophonte cornuta Philippi, 1840. II Loureirophonte majahualensis Fiers, 1993. II Mexicolaophonte arganoi Cottarelli, 1977. II Onychocamptus mohammed (Blanchard & Richard, 1891). I

Paralaophontodes echinatus (Willey, 1931). I

Family Longipediidae Sars, 1911 Longipedia americana Wells, 1980. I

Family Louriniidae Sars, 1911 Lourinia armata (Claus, 1866). II

Family Metidae Philippi, 1843 Metis holothuriae (Edwards, 1891). II

Oculosetella gracilis Dana, 1852. I

Family Miraciidae Dana, 1846

Macrosetella gracilis (Dana, 1848). I, II, III, IV

Miracia efferata Dana, 1852. I, II

M. minor Scott, 1893. I

Family Tachidiidae Sars, 1909

Euterpina acutifrons Dana, 1852. I, II, III, IV

Microarthridion vazquezi Gómez-Noguera &

Fiers, 1997. III

Family Tegastidae Norman, 1911 Tegastes intermedius (Herrick, 1887). I

Family Tetragonicipitidae Lang, 1944
Diagoniceps mexicana Fiers, 1995. I
Godianiceps maya Fiers, 1995. II
Odaginiceps clarkae Fiers, 1995. II
O. xamaneki Fiers, 1995. I
Oniscopsis robinsoni Chappuis & Delamare, 1956. I
Phyllopodopsyllus yucatanensis Fiers, 1995. I

Family Thalestridae Sars, 1905 Rhynchothalestris rufocincta (Brady, 1880). II

Order Siphonostomatoida Thorell, 1859 Family Dirivultidae Humes & Dojiri, 1980 Aphotopontius arcuatus Humes, 1987. III A. baculigerus Humes, 1987. III A. flexispina Humes, 1987. III

A. limatulus Humes, 1987. III

A. mammillatus Humes, 1987. III, IV

Ceuthocetes aliger Humes & Dojiri, 1980. III

C. acanthothrix Humes, 1987. III

C. cristatus Humes, 1987, III

C. introversus Humes, 1987, III

Ecbathyron prolixicauda Humes, 1987. III

Exrima singula Humes, 1987. III

Nilva torifera Humes, 1987. III

Rhogobius contractus Humes, 1987. III

Stygiopontius appositus Humes, 1989. III

S. cinctiger Humes, 1987. III

S. flexus Humes, 1987. IV

S. hispidulus Humes, 1987. III

S. lumiger Humes, 1989. III

S. mucroniferus Humes, 1987. IV

S. paxillifer Humes, 1989. III

S. sentifer Humes, 1987. III

S. verruculatus Humes, 1987. III

Family Pontoeciellidae Giesbrecht, 1895 Pontoeciella abyssicola Giesbrecht, 1895. I

Family Rataniidae Giesbrecht, 1897 Ratania flava Giesbrecht, 1891. I

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REFERENCES

- ALAMEDA DE LA MORA, G. 1980. Sistemática y disribución de los copépodos (Crustacea) del Golfo de Tehuantepec (México). Tesis Facultad de Ciencias, UNAM, México, D.F. 121 p.126.
- AGUAYO-SAVINÓN, M.A. 1965. Contribución al conocimiento de los copépodos de la zona arrecifal de Veracruz, Ver. (sistemática y distribución). Tesis Facultad de Ciencias, Universidad Nacional Autónoma de México, México, D.F. 76 p.
- ÁLVAREZ-CADENA, J.N. 1985. Composición y abundancia de los copépodos planctónicos de la Bahía de Mazatlán, Sin. México. An.Inst. Cienc. del Mar y Limnol., Univ. Nal. Autón. México 12(1):1-14.
- ÁLVAREZ-CADENA, J.N. & R. CORTÉS-ALTAMIRANO. 1990. Algunos factores físicos y biológicos que afectan las poblaciones naturales de *Acartia tonsa y A. lilljeborgii* (Copepoda:Acartiidae) en el Estero de Urías, Sinaloa, México. *Inv.Mar.CICIMAR* 5(1):69-77.
- ÁLVAREZ-SILVA, C. & S. GÓMEZ-AGUIRRE. 1994. Labidocera aestiva and L. scotti in Tamiahua lagoon, Veracruz, Mexico. Hydrobiologia 292/293:265-269.
- BJÖRNBERG, T.K. 1971. Distribution of plankton relative to the general circulation system in the area of the Caribbean Sea and adjacent regions. *In:* UNESCO (ed.) *Symposium on Investigations and Resources of the Caribbean Sea and Adjacent Regions.* UNESCO, Paris, pp. 343-356.
- BOWMAN, T.E. & N.W. JOHNSON. 1973. Distributional atlas of Calanoida in the California Current region. CalCOFI Atlas 19.
- BRINTON, E., A. FLEMINGER & D. SIEGEL-CAUSEY. 1986. The temperate and tropical planktonic biotas of the Gulf of California. *CalCOFI Rep.* 27:228-266.
- CAMPOS, A. 1980. Distribución y abundancia relativa de los copépodos planctónicos en el Golfo de México y el Mar Caribe. Cienc. Biol. 5:57-74.
- CAMPOS, A. 1982. Lista de especies de copépodos planctónicos de aguas cubanas. *Poeyana* (24):1-27.
- CAMPOS, A. & E. SUÁREZ. 1994. Copépodos pelágicos del Golfo de México y Mar Caribe. I. Sistemática y biología. CIQRO/CONACYT, México. 374 p.
- CERVANTES-DUARTE, R. & S. HERNÁNDEZ-TRUJILLO. 1989. Características hidrográficas de la

- parte sur de la corriente de California y su relación con algunas especies de copépodos en 1983. *Inv. Mar. CICIMAR 4*(2):211-224.
- DE LA CRUZ, A. 1971. Estudios de plancton en el banco de Campeche. *In:* UNESCO (ed.). *Coloquio sobre investigaciones y recursos del Mar Caribe y regiones adyacentes.* UNESCO, París, pp. 375-383.
- DE LA CRUZ, A. 1972. Zooplancton de la región sureste del Golfo de México. Ciencias (Cuba), Serie 4(24):1-55.
- ESTERLY, C.O, 1911. Third report on the Copepoda of the San Diego region. *Univ. Calif. Publ. Zool.* 6(14):313-352.
- ESTERLY, C.O, 1912. The occurrence and vertical distribution of the Copepoda of the San Diego region with particular reference to nineteen species. *Univ. Calif. Publ. Zool.* 9(6):253-340.
- ESTERLY, C.O, 1913. Fourth taxonomic report on the Copepoda of the San Diego region. Univ. Calif. Publ. Zool. 11(10):181-196.
- FERRARI, F.D., 1975. Taxonomic notes of the genus Oncaea (Copepoda: Cyclopoida) from the Gulf of Mexico and Northern Caribbean Sea. Proc. Biol. Soc. Wash. 88(21):217-232.
- FERRARI, F.D. & T.E. BOWMAN. 1980. Pelagic copepods of the family Oithonidae (Cyclopoida) from the East coasts of Central and South America. Smithson. Contr. Zool. 312:1-27.
- FIERS, F. 1995. New Tetragonicipitidae (Copepoda, Harpacticoida) from the Yucatecan continental shelf (Mexico), including a revision of the genus *Diagoniceps* Willey. *Bull. Inst. Royal Sci. Nat. Belg.* 65:151-236.
- FLEMINGER, A. 1956. Taxonomic and distributional studies on the epiplanktonic calanoid copepods (Crustacea) of the Gulf of Mexico. Ph. D. Dissertation, Harvard University Library, Cambridge, Massachusetts. 317 p.+ 25 p.
- FLEMINGER, A. 1957a. New calanoid copepods of *Pontella Dana* and *Labidocera Lubbock* with notes on the distribution of the genera in the Gulf of Mexico. *Tul. Stud. Zool.* 5(2):19-34
- FLEMINGER, A. 1957b. New genus and two new species of Tharybidae (Copepoda Calanoida) from the Gulf of Mexico with remarks on the status of the family. Fish. Bull. U.S. 116:347-354.
- FLEMINGER, A. 1957c. New calanoid copepods of the families Aetideidae, Euchaetidae, and Stephidae from the Gulf of Mexico. Fish. Bull. U.S. 117:355-363.
- FLEMINGER, A. 1983. Description and phylogeny of *Isaacsicalanus paucisetus* n. gen., n. sp., (Copepoda: Calanoida) from East Pacific hydrothermal vent site (21 N). *Proc. Biol. Soc. Wash.* 96(4):605-662.
- FLEMINGER, A. & K. HULSEMANN. 1977. Geographical range and taxonomic divergence in North Atlantic Calanus (C. helgolandicus, C. finmarchicus and C. glacialis). Mar. Biol. 40: 233-248.
- FLEMINGER, A. & T.E. BOWMAN, 1956. A new species of *Candacia* (Copepoda: Calanoida) from the western North Atlantic Ocean. *Proc. U.S. Nat. Mus.* 106(3370):331-377.
- GRICE, G.D. 1960. Copepods of the genus Oithona from the Gulf of Mexico. Bull. Mar. Sci. Gulf & Carib. 10(4): 485-490.
- GRICE, G.D. 1961. Calanoid copepods from ecuatorial waters of the Pacific Ocean. Fish. Bull. U.S. 61: 171-246.
- GRICE, G.D. 1969. Calanoid copepods from the Caribbean Sea and Gulf of Mexico. 1. New species and new records from midwater trawl samples. *Bull. Mar. Sci.*, 19(2): 446-455.

- HENDERSON, J.C., 1958. Preliminary study of distribution of some copepods in upper Laguna Madre. Master's Thesis, A & M College of Texas, University of Texas, Austin. 41 p.
- HERNÁNDEZ-TRUJILLO, S. 1984. Contribución al conocimiento de la distribución y abundancia de copépodos frente a Bahía Magdalena, Baja California Sur en el verano y otoño de 1982. Tesis Escuela Nacional de Estudios Profesionales Iztacala, UNAM, México, D. F. 74 p.
- HERNÁNDEZ-TRUJILLO, S. 1989a. Los copépodos del Pacífico sudcaliforniano en enero de 1984. *Inv. Mar. CICIMAR 4*(2):233-240.
- HERNÁNDEZ-TRUJILLO, S. 1989b. Variación de la distribución de los copépodos en el Pacífico de Baja California Sur. Tesis Maestría CICIMAR-Instituto Politécnico Nacional, México, D. F. 80 p.
- HERNÁNDEZ-TRUJILLO, S. 1991a. Variación latitudinal de la diversidad de copépodos en la costa occidental de B.C.S. (1982-1984). *Ciencias Marinas*. 17(4):83-103.
- HERNÁNDEZ-TRUJILLO, S. 1991b. Análisis de la diversidad de copépodos en el Pacífico de B.C.S. (mayo, 1986). An. Inst. Cienc. Mar y Limnol., Univ. Nal. Autón. México 18(2):279-288.
- HERNÁNDEZ-TRUJILLO, S. 1991c. Copépodos pontélidos en Bahía Magdalena, Baja California Sur (junio, julio de 1988). *Inv. Mar. CICIMAR 6*(1):155-164.
- HERNÁNDEZ-TRUJILLO, S. 1996. Marine copepod diversity of Mexico: an assessment. VI International Conference on Copepoda. Hamburg, August 1996 (abstract) pp.61.
- HERON, G.A. 1964. Seven species of Eurytemora (Copepoda) from northwestern North America. Crustaceana 7:199-211.
- HERRICK, C.L. 1887. Contribution to the fauna of the Gulf of Mexico and the South. List of the freshwater and marine Crustacea of Alabama, with descriptions of the new species and synoptical keys for identification. *Mem. Denison Sci. Assoc.* 1(1):1-56.
- HOPKINS, T.L. 1982. The vertical distribution of zooplankton in the Eastern Gulf of Mexico. *Deep-Sea. Res.* 29(9):1069-1083.
- HUMES, A.G. 1988a. Oncaea praeclaran sp. (Copepoda, Poecilostomatoid) from deep-sea hydrothermal vents in the eastern Pacific. J. Plankton Res. 10(3):475-485.
- HUMES, A.G. 1988b. Copepoda from deep-sea hydrothermal vents and cold seeps. *Hydrobiologia*. 167/168:554-594.
- HUMES, A.G. 1990. Aphotopontius probulus sp. nov., and records of other siphonostomatoid copepods from deep-sea vents in the eastern Pacific. Scient. Mar. 54(2):145-154.
- HUMES, A.G. 1991. Zoogeography of copepods at hydrothermal vents in the Eastern Pacific Ocean. Bull. Plankton Soc. Japan, Spec. Vol. (1991):383-389.
- HLYS, R. & G. Boxshall. 1991. Copepod evolution. The Ray Society, London. 468 p.
- JEFFRIES, H.P. 1962. Succession of two Acartia species in estuaries. Limnol. Oceanogr. 7:354-364.
- JIMÉNEZ-PÉREZ, L.C. 1989. Análisis de la taxocenosis de los copépodos pelágicos en la zona frente a Playa San Ramón, Baja California, México. *Inv. Mar. CICIMAR* 4(2):165-174.
- JROMOV, N.S., 1965. Sobre la distribución cuantitativa del plancton en la parte noroccidental del Mar Caribe y el Golfo de México. Trabajos del VNIRO 57, Moscú. pp. 381-391, 4 figs. (en ruso).
- JROMOV, N.S. 1967. Investigaciones de plancton en el Golfo de México y Mar Caribe. *Invest. Pesq. Cubano-Soviéticas* II. VNIRO y CIP, Moscú 39-57 (en ruso).
- JROMOV, N.S. & O. GONZÁLEZ C., 1967. Distribución del plancton en el Gol.fo de México y algunos rasgos de su dinámica estacional. *Invest. Pesq. Cubano-Soviéticas.* VNIRO y CIP, Moscú, pp. 47-69, 11 figs. (en ruso).

- LÓPEZ-SALGADO, I. & E. SUÁREZ. 1996. Ampliación de ámbito de *Ratania flava* (Copepoda: Siphonostomatoida) en el Atlántico Noroccidental. *Rev. Biol. Trop.* 44:944-945.
- MARIKOVA, V.K. & A. CAMPOS., 1967. Características cuantitativas y cualitativas del zooplancton de la plataforma cubana. *Estudios Inst. Oceanología.* (Academia de Ciencias, Cuba) 2(2):63-80.
- MARKHASEVA, E.L. 1996. Calanoid copepods of the family Aetideidae of the world ocean. Russian Academy of Sciences, Zoological Institute. St. Petersburg. 331 p.
- MICHEL, H.B. & M. FOYO. 1976. Caribbean zooplankton. Part I. Siphonophora, Heteropoda, Copepoda, Euphausiacea, Chaetognatha and Salpidae. Office of Naval Research, Dept. of the Navy, U.S.A. 549 p.
- NISHIDA, S. 1985. Taxonomy and distribution of the family Oithonidae (Copepoda, Cyclopoida) in the Pacific and Indian Oceans. *Bull. Ocean Res. Inst. Univ. Tokyo* 20:1-163.
- ORTNER, P.B., L.C. HILL & S.R. CUMMINGS, 1989. Zooplankton community structure and copepod species composition in the northern Gulf of Mexico. *Cont. Shelf Res.* 9(4):387-402.
- OWRE, H.B. & M. FOYO, 1964a. Report on a collection of Copepoda from the Caribbean Sea. Bull. Mar. Sci. Gulf & Carib. 14(2):359-372.
- OWRE, H.B. & M. FOYO, 1964b. Plankton of the Florida Current. Part IX. Additions of the list of Copepoda, with descriptions of two rare species. *Bull. Mar. Sci. Gulf & Carib.* 14(2):342-358.
- OWRE, H.B. & M. FOYO, 1967. Copepods of the Florida Current. Fauna Caribaea No. 1: Crustacea, 1: Copepoda. Inst. of Mar. Sci., University of Miami Florida. 137 p.
- PALOMARES-GARCÍA, J.R. 1987. Abundancia, distribución y variación estacional de los copépodos (Crustacea) de la ensenada de La Paz, Baja California Sur. Tesis Facultad de Ciencias, UNAM, México, D.F. 162 p.
- PALOMARES-GARCÍA, J.R. 1991. Ampliación de la distribución de *Pseudodiaptomus culebrensis* (Calanoida:Copepoda) en el Golfo de California, México. *Rev. Biol. Trop.* 39(1):181.
- PALOMARES-GARCÍA, J.R. 1992. Análisis de la taxocenosis de los copépodos en el complejo lagunar de Bahía Magdalena-Almejas, B.C.S., durante 1985-86. *Ciencias Marinas*, 18:71-92
- PARK, T. S., 1970. Calanoid copepods from the Caribbean Sea and Gulf of Mexico. 2. Two new species and new records from plankton samples. *Bull. Mar. Sci.* 20(2):472-546.
- Park, T. S. 1975a. Calanoid copepods of the family Euchaetidae from the Gulf of Mexico and western Caribbean Sea. Smithson. Contr. Zool. 196:37-48.
- PARK, T. S. 1975b. Calanoid copepods of the genera Gaetanus and Gaidius from the Gulf of Mexico. Bull. Mar. Sci. 25(1):9-34.
- PARK, T. S. 1975c. Calanoid copepods of the genera Aetidopsis, Pseudaetideus and Chiridius from the Gulf of Mexico. Bull. Mar. Sci. 25(2):272-290.
- PARK, T. S. 1976. Calanoid copepods of the genus *Euchirella* from the Gulf of Mexico. *Contr. Mar. Sci.* 20:101-122.
- PARK, T. S. 1978. Calanoid copepods (Aetideidae and Euchaetidae) from Antarctic and sub-Antarctic waters. *Antarct. Res. Ser.* 27:91-290.
- POLANCO, J.E. 1968. Contribución al conocimiento de la sistemática y distribución de las familias Corycaeidae y Sapphirinidae (Crustacea: Copepoda) en la zona arrecifal de Veracruz, Ver. Tesis Facultad de Ciencias, Universidad Nacional Autónoma de México, México, D.F. 109 p.
- RAZOULS, C. 1996. Diversité et répartition géographique chez les copépodes pélagiques. 2. Platycopioida, Misophrioida, Mormonilloida, Cyclopoida, Poecilostomatoida, Harpacticoida, Monstrilloida. Ann. Inst. Oceanogr. 72:5-149.

- REID, J.W. 1990. Continental and coastal free-living Copepoda (Crustacea) of Mexico, Central America and the Caribbean region. *In:* D. Navarro & J.G. Robinson (eds.). *Diversidad biológica en la Reserva de la Biosfera de Sian Ka'an, Quintana Roo, México.* CIQRO/University of Florida, Chetumal, Q. Roo, pp. 175-213.
- SALAS-MARMOLEJO, J. 1981. Distribución y abundancia de los copépodos (Copepoda) en la Laguna de Términos, México, durante un ciclo anual (1978). Tesis Facultad de Ciencias, Universidad Nacional Autónoma de México, México, D. F. 88 pp.
- SUÁREZ, E., 1990a. Copépodos planctónicos de la Bahía de la Ascensión, Reserva de la Biosfera de Sian Ka'an, Q.Roo, México. In: D. Navarro, & J. Robinson (eds.). Diversidad biológica en la Reserva de la Biosfera de Sian Ka'an, Quintana Roo, México. CIQRO/ PSTC, University of Florida, Chetumal, Q. Roo, pp.215-238.
- SUÁREZ, E. 1991a. New report of Euaugaptilus filigerus (Claus, 1863) (Copepoda: Calanoida). Inv. Mar. (CICIMAR) 6(1):127-130.
- St'ÁREZ, E. 1991b. Primer registro de Arietellus giesbrechti Sars (Copepoda: Calanoida) en el Canal de Yucatán y su relación con una surgencia local. Univ. y Ciencia 8(15): 31-36.
- SUÁREZ, E. 1992a. Lista faunística de los copépodos calanoides (Copepoda: Calanoida) del Golfo de México: consideraciones zoogeográficas. *Ciencias Marinas 18*(1): 119-151.
- SUÁREZ, E. 1992b. Copépodos planctónicos (Crustacea: Copepoda) del estrato 0-50 m en la zona Sur del Golfo de México. *Carib. J. Sci. 28*(3-4):47-59.
- SUÁREZ, E. 1993a. A new species of *Thaumaleus* (Copepoda: Monstrilloida) from the eastern coast of the Yucatan Peninsula. *Crustaceana* 64(1):85-89.
- SUÁREZ, E. 1993b. Monstrilla reidae, a new species of monstrilloid copepod from the Caribbean Sea off Mexico. Bull. Mar. Sci. 52 (2):717-720.
- SUÁREZ, E. 1993c. Two new monstrilloids (Copepoda: Monstrilloida) from the coastal area of the Mexican Caribbean Sea. J. Crust. Biol. 13(2):349-356.
- SUÁREZ, E. 1994a. Copépodos pláncticos de la Bahía de Chetumal, México (1990-1991). Carib.J.Sci. 30(3-4):181-188.
- SUÁREZ, E. 1994b. Lista faunística comentada de los copépodos monstriloides (Crustacea, Copepoda) de la Bahía de la Ascensión, Q. Roo. Sian Ka'an, Ser. Documentos. 2:11-17.
- SUÁREZ, E. 1996. On a tropical subspecies of *Monstrilla wandelli* (Copepoda: Monstrilloida) from the Mexican coasts of the Caribbean Sea. Crustaceana 69 (1): 34-40.
- SUÁREZ, E. & R. GASCA. 1989a. Copépodos calanoides epiplanctónicos del Domo de Costa Rica (julio-agosto, 1982). Ciencias Marinas 15 (1): 89-102.
- SUÁREZ, E. & R. GASCA. 1989b. Copépodos epiplanctónicos (Crustacea) del Canal de Yucatán (mayo-junio,1984). Car. J. Sci. 25(3-4):196-202.
- SUÁREZ, E. & R. GASCA. 1991. Calanoid copepods of the Southern Gulf of Mexico (spring, 1986). Bull. Plankton Soc. Japan. Spec. Vol. (1991): 593-596.
- SUÁREZ, E. & R. GASCA. 1992. A new species of *Monstrilla* from the coastal zone of the Mexican Caribbean Sea. *Crustaceana* 63(3):301-305.
- SUÁREZ, E. & R. GASCA. 1996. Planktonic copepods of Bahía de la Ascensión, Caribbean coast of Mexico: a seasonal survey. *Crustaceana* 69(2):162-174.
- SUÁREZ, E. & J.W. REID. 1991. Ampliación del ámbito de *Macrochiron sargassi* G.O. Sars (Copepoda: Lichomolgidae) en el Atlántico Noroccidental. *Rev. Biol. Trop.* 39(2):321-322.
- SUÁREZ, E. & R. VÁSQUEZ-YEOMANS. 1996. On Monstrilla spinosa Park, 1967 (Copepoda: Monstrilloida) in The western Pacific. Crustaceana 69(3): 288-294.
- SUÁREZ, E. & J.C. ZURITA. 1991. Copépodos epipelágicos de la zona costera central de Michoacán, México (invierno-verano, 1983). *Univ. y Ciencia* 8(16):25-32.

- SUÁREZ, E., R. GASCA & E. SOSA. 1990. Calanoid copepods (Copepoda: Calanoida) from the Mexican Western Gulf of Mexico. Car. J. Sci. 26(3-4):122-124.
- TRUJILLO, A. 1986. Life cycle of the marine calanoid copepod *Acartia californiensis* Trinast reared under laboratory conditions. *CalCOFI Rep.* 27:188-204.
- TURCOTT-DOLORES, V. 1976. Plancton de lagunas costeras. XIV. Variación estacional de los copépodos en la Laguna de Yávaros, Son., México (1969-1970). Rev. Lat. Amer. Microbiol. 18:159-165.
- TURNER, J.T., S. COLLARD, J.C. WRIGHT, D. MITCHELL & P. STEELE. 1979. Summer distribution of pontellid copepods in the neuston of the eastern Gulf of Mexico continental shelf. *Bull. Mar. Sci.* 29(3):287-297.
- TURNER, J.T. & S.B. COLLARD. 1980. Winter distribution of pontellid copepods in the neuston of the Eastern Gulf of Mexico continental shelf. *Bull. Mar. Sci.* 30(2):526-529.
- WALTER, T.C., 1989. Review of the new world species of *Pseudodiaptomus* (Copepoda: Calanoida) with a key to the species. *Bull. Mar. Sci.* 45(3):590-628.
- ZAMORA-SÁNCHEZ, M.E. 1974. Estudio de las especies del género Acartia (Copepoda:Acartiidae) de la zona estuarina de Agiabampo, Sonora: taxonomía, distribución y notas ecológicas. Tesis Facultad de Ciencias, Universidad Nacional Autónoma de México, México, D.F..
- ZAMORA-SÁNCHEZ, M.E.& S. GÓMEZ-AGUIRRE. 1985. Una especie nueva del subgénero Acanthacartia Steuer 1915 (Copepoda: Acartiidae) de la laguna costera de Agiabampo, Sonora, México. Anales Inst. Biol. Univ. Nac. Autón. México, Ser Zool. 56(2):337-346.